February 5, 1958

Education Summary

A SEMI-MONTHLY REPORT ON NEW DEVELOPMENTS, TRENDS, IDEAS, AND RESEARCH IN EDUCATION

• *Trends and Issues*

The much-touted Federal Aid Program of the Department of Health, Education and Welfare has shrunk to the point where it is overshadowed by the program for the National Science Foundation. The blueprint was revealed in the U.S. Budget for 1958-59. President Eisenhower is not asking Congress for the advertised $1 billion in aid for the next four years. Neither is he asking for the $225 million, as reported previously, for the first year. His request is for "obligational authority" totaling only $146 million —but only $75 million in cash for next year. The assumption is that the states can match and absorb only that amount during the next twelve months. By contrast, the President's Budget requests $82 million for the National Science Foundation to be spent "for the encouragement of mathematics and science." Informed opinion in Washington is that Congress is almost certain to vote the $82 million. There is less certainty—even doubt—that Congress will approve the relatively modest $75 million request for HEW.

The achievement of American schools is majestic and unprecedented, says the Educational Policies Commission in its 32-page report, "The Contemporary Challenges to American Education." However, urgent deficiencies exist. America's response to Russia's Sputniks, the EPC points out, should not be to belittle our schools nor to copy Russia's system. Instead. it should remove some of the schools' deficiencies. It can be done, the EPC asserts confidently. First of all, by giving the gifted better educational opportunities; then, by improving counseling and guidance. Finally, we must upgrade our teaching. This third step cannot be taken at once, but must be paced through short-range, intermediate and long-range programs. EPC's prescription for short-range programs: Come to the immediate aid of higher education, particularly the graduate school, to help fill the need for teaching staffs, lab and bibliographic equipment, scholarships and fellowships, in all subject areas. The intermediate range: Improve the recruitment, training and retraining of classroom teachers. For the long range: Infuse public and private support for all schools on a massive scale—double expenditures for education by 1967 to $30 billion a year.

The survival of the U.S., as Dr. James R. Killian, Jr., Special Assistant to the President for Science and Technology, sees it is up to Americans now in school. They should study harder, take their studies more seriously, with natural science a required subject in all schools, he said. Speaking at the Congressional Dinner, traditionally held by the Women's National Press Club in Washington on the opening day of Congress, Dr. Killian urged strongly that colleges and universities raise their entrance requirements with particular emphasis on English and mathematics. The need, he said, is "for more emphasis in our society on the value of intellectual discipline and on the importance of content rather than method . . . for more rigorous teaching of intellectual skills and (greater stress) on high standards of excellence for both teachers and pupils."

A career poll in 13 foreign nations discloses that a career in science is the goal looming highest in the minds of those sampled. More surprising, perhaps more significant, is the fact that a job as a skilled laborer exercises an appeal nearly as strong as science, and in some countries even stronger. In most countries, however, a career in teaching received less than a 5% vote.

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Editor: *John Nerber*

Assistant Editor: Mary H. Paré

Research Associate: Mary E. Anderson

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● *Administration*

How are your teachers doing on reading skills? Dr. Paul Witty, in the January *Nation's Schools,* points out that administrators should make systematic appraisals of the extent to which teachers are developing phonetic and vocabulary skills, as well as the extent to which other basic reading skills are being developed.

They should inquire whether pupils are becoming resourceful and independent in using books to satisfy their diverse interests and needs. They should investigate whether reading is being emphasized as an all-school, every-teacher, every-subject responsibility.

The administrator should check, too, to make sure that a developmental reading program really exists throughout his entire system. There should be systematic reading instruction in the junior high school and a cooperative program in the high school.

Finally, the administrator should inquire whether the school has made adequate provision for diagnosis and evaluation of reading instruction, and he should know whether the instructors and materials necessary for such a program are available.

NEW BOOKS
FOR LEISURE READING . . .

The Right of the People, by William O. Douglas, is a timely, highly significant examination of how best to retain individual liberty in the American democracy. "My thesis is," Justice Douglas explains, "that there is no free speech in the full meaning of the term unless there is freedom to challenge the very postulates on which the existing regime rests." In three parts: In Part I, he discusses the right of the people; Part II, the "right to be left alone" (rights of privacy, loyalty investigations, religious freedom, many others); and Part III, the authority of the people and the increasing encroachment of the military in civil affairs. Delivered last spring as the North Lectures at Franklin and Marshall College, the substance of Justice Douglas's new book is a provocative challenge to thoughtful Americans. From: Doubleday & Co., 575 Madison Ave., N.Y. 22. 238pp. Index. $4.00.

● *Schools and the Public*

Faced with a teacher shortage of 5000, New York City's Board of Education is carrying its recruitment campaign for new teachers directly to the parents of students.

The Board is distributing an appeal to parents of junior and some senior high students, inviting them to consider a teaching career if qualified. The statement begins, "It is possible that you, or someone you may know, may have the preliminary education that is needed to take the examination to be a teacher."

The appeal being directed at city parents is aimed largely at filling vacancies existing in the junior high division. According to Dr. Irving S. Hecht, coordinator of the teacher recruitment committee, about 21% of teachers in the junior division do not hold regular licenses to teach subjects to which they are assigned.

Vacancies include 450 in English, 500 in math and 280 in social studies.

Eight academic credit hours in appropriate education courses are required for the positions, but candidates have until October 1 to complete the courses. Teachers appointed will get three years more to complete the full educational requirements for licensing.

Why should people without children be taxed for school costs? This question was recently asked *The Christian Science Monitor* in its special service feature, "The Reader Asks." The Monitor's answer:

"Because our ancestors decided that public education was beneficial to the community as a whole and directly, or indirectly, to every member of it. Similar thinking is reflected in compulsory school attendance laws. It can be argued that an ignorant community is costly even in dollars and cents, producing lower revenues, requiring more safeguards against crime, fire and unsanitary conditions. An employer without children may benefit from having better schooled employees—and neighbors. The chief argument undoubtedly is that citizens with some education are expected to be more intelligent voters."

CURRENT READING OF SPECIAL INTEREST

The Democratic Way to Better Schools, *by O.C. Miller. Exposition Press, 386 Fourth Ave., N.Y. 16. 210pp. $3.50. (A study of what is wrong with public schools and what to do about it is the subtitle. A critique and criticism of our public schools with particular emphasis upon administration.)*

● *The Profession*

Should teachers join unions? asks the Massachusetts Teachers Association. William J. O'Keefe, attorney for the M.T.A. and professor of law at Boston College answers "no." "The only reasons," says Mr. O'Keefe in a recent letter to the president of the M.T.A., "I can attribute to a desire to join a labor union are ignorance of our law and disregard for professional status."

He explained that legal decisions have been established that school committees need not recognize unions and may decline to employ union members and that a teachers' union has not the right to strike. If school committees give cognizance to a union bargaining agent, surrendering their discretion, "it could mean the end of salary schedules."

John Ligtenberg, general counsel for the American Federation of Teachers, in an open letter to Somerville (Mass.) teachers denied that recognition of union

bargaining agents by school committees could hurt salary schedules, which he said "exist as a result of the efforts of teacher unions and other teacher organizations which have fought for them and insisted on their enforcement."

Ligtenberg quoted a court ruling as to whether a school committee could bargain collectively. ". . . There is no statute, public or private, which forbids such negotiations . . . The claim of the defendant (the school board) that this would be an illegal delegation of authority is without merit. The authority is and remains with the board."

● *Curriculum*

What will math look like in ten years? Dr. Howard F. Fehr, president of the National Council of Teachers of Mathematics, lists the characteristics of the new math curriculum, *if* needed changes are made:

1. The artificial separation of algebra, geometry and analysis will be eliminated.
2. Solid geometry as a separate course will disappear from the curriculum.
3. The logarithmic solution of triangles will be dispensed with.
4. Trigonometry will become an integral part of analysis, no longer a separate subject.
5. A fundamental concept—that of sets—will dominate mathematics in the years ahead.
6. Probability and statistical inference, a science that grew out of a gambler's interest in his chances to win, will be introduced in the 12th year of math.
7. Algebra in the near future will deal with such topics as groups, rings, fields.
8. Euclidean geometry will take a back seat. There will be geometry of three dimensions.
9. Statistical reasoning will become a part of many phases of mathematical instruction.

● *Teaching Methods*

Do grades indicate quality of learning? No, writes Dr. Carl A. Clark, chairman of psychology at the Chicago Teachers College, in the December *Chicago Schools Journal.* Grades are obtained by tests, and while grades, ideally, will give some indication of the student's understanding—or lack of understanding—they may tell very little about the student's attitude or his ability to use what he has supposedly learned in the basic situation for which it was intended.

A student with an average grade, for example, may have acquired an enthusiasm for the material which will keep him reading and thinking and advancing in the field until his skill and knowledge may soon far surpass the student who obtained the top grade in the course, but who ceased his interest after getting the grade. Thus, a student with a lower grade may receive a better education than one with a higher grade.

This does not mean necessarily that the grading system is at fault. It means simply that a grading system does not, and cannot, evaluate everything of importance in the educative process.

THE TWELVE-MONTH PANACEA

In these days when local school districts in New Jersey are building new schools at the rate of $100 million a year, people welcome any suggestion that seems to offer a chance of saving school building dollars. Right now there is a good deal of interest in the possibility of increasing the length of the school year to twelve months, and many enthusiasts see this as a panacea for our physical facilities problems.

It will pay us to examine the facts more carefully:

Today we have from 180-185 school days, depending on snow storms and other special circumstances. If we were to extend the school year to twelve months, we would have about 235 school days—an increase of 30%. (Five days a week for 52 weeks is 260 days. From this subtract as a minimum six holidays, Christmas week, and weeks off in the spring and fall.) We might have to make some additional provision for 2-3-week teacher vacations and some provision for maintenance and repairs.

If we lengthened the school year in this way, teacher salaries would obviously have to be increased. There is no saving in this area. However, there would be a "plant" or "capital debt service" saving.

Today the average debt service of New Jersey schools is about 10% of the total cost of education. This is fairly constant as school populations and buildings have to be replaced. A twelve-month school would reduce this about 30%. Since this is 30% of 15%, it looks then as if it offers a gross saving of 3% on our cost of education.

To offset this we would have to face the fact that any such program would completely disrupt any program of family vacations at the shore or in the mountains. Many will feel that the values of these family projects far outweigh the 3% savings, while resort operators and other business people in the lake and shore counties of New Jersey would certainly take a dim view of any proposal that would disrupt current vacation schedules.

Finally, there are many districts where a twelve-month program would not produce any savings if the pupils per grade were fewer than 48 in any one school.

—*Leonard E. Best*, legislative chairman, N.J. State Federation of District Boards of Education, in the *NJEA Review*, January 1958.

● *Teacher Training and Growth*

The importance of minor details necessary to a well-regulated classroom are never stressed enough in educational courses, writes Roy M. Hayes, in the January *Clearing House*. He believes that the beginning teacher's first job is to establish control of the class, to establish his own plan of procedure as rapidly as added experience enables him to do so.

Some of Hayes' suggestions:

- Nothing impresses a group more than a prompt and businesslike way of starting off. Seat your students alphabetically: Either put their names on their desks or make a diagram on the board.
- Never accept any mode of address except Mr., Mrs. or Miss plus your last name, or permit anything else when other teachers are mentioned.
- Tell your students at the start what you expect of them in the way of cooperation, individually and as a whole.
- See that regulations are carried out, firmly and clearly.
- You should be ready to begin the class at once. Plan your work so that all students will have enough to do for the whole period.
- Putting off discipline encourages bad behavior. When it is apparent that a student has no intention of cooperating, he should be sent to the administrative office. Inform the office when this happens. The first time, ask that the student be sent back after school for a conference—don't hold the conference in front of others.
- When in doubt, consult the principal.

CURRENT READING OF SPECIAL INTEREST

In-Service Education: for Teachers, Supervisors and Administrators. *The 56th Yearbook of the National Society for the Study of Education. Part I. Edited by Nelson B. Henry. University of Chicago Press, 5757 Ellis Ave., Chicago 37, Ill. 376pp. Index. $4.00 cloth, $3.23 paper. (The report of returns from an inquiry submitted by the Society to superintendents and principals in city school systems with a view of finding the best practices utilized for the improvement of teachers in service.)*

● *Philosophy and Goals*

Conversation in this country has fallen upon evil days, says A. Whitney Griswold, president of Yale University, in a new book. The great creative art whereby man translates feeling into reason and shares with his fellow man those innermost thoughts and ideals of which civilization is made, is beset by forces which threaten its demise.

It is forsaken by a technology that is so busy tending its time-saving devices that it has no time for anything else. It is drowned out in singing commercials by the world's most productive economy that has so little to say for itself it has to hum it. It is hushed and slushed in dimly lighted parlors by television audiences who used to read, argue and even play bridge, an old-fashioned card game requiring some speech.

Conversation is shouted down by devil's advocates, thrown into disorder by points of order. It is subdued by soft-voiced censors who, in the name of public relations, counsel discretion and the avoidance of controversy, like so many family physicians breaking the news gently and advising their patients to cut down on their calories. It languishes in a society that spends so much time passively listening and being talked to that it has all but lost the will and skill to speak for itself.

Whose fault is it? It's nobody's fault but our own, Dr. Griswold points out. He rests his case on a cardinal principle of American business: The customer is always right. If he wants to spend his time looking and listening without ever discussing with his friends the meaning of what he sees and hears, that is his prerogative.

● *The Math Program*

Children live math all day long, says Dr. Alice V. Keliher in the February *Grade Teacher*. Bicycle contests determine who is *first*, therefore determining who produces the greatest speed. Six asks ten what *time* it is because he must be home in *ten* minutes. Ten plays Scrabble and has to figure *double* and *triple* word scores, as well as *totals*.

Informal arithmetic experiences dominate the child's out-of-school day. Do teachers make full use of them? asks Dr. Keliher. Her answer is *no*. There are many ways to use arithmetic during the class day. Some of them: records of attendance, lunch orders, numbers to see school nurse, doctor or dentist, books on hand, many others.

Arithmetic ought to be one of the most exciting and real subjects of study in the classroom, Dr. Keliher concludes. However, teachers in their zeal to move children through the textbooks and workbooks are missing many of the concrete experiences that make arithmetic meaningful to children. Connect the abstract with real experiences, she says. It is rewarding to hear, "Gosh, I see that now. It's like the way my bike speedometer works." Or, "Gee, that's easy now. I never knew that when I split a candy bar in half I was really doing fractions."

Funds available for math teachers have been announced by the National Science Foundation. Several universities and colleges have been granted these funds by the Foundation to sponsor and conduct Academic-Year Institutes for the supplementary training of secondary school teachers in math and science for the school year 1958-59.

Stipends will be granted by the Institute to qualified teachers to the amount of $3,000 for the academic year. In addition, there are allowances for dependents, travel and books. Tuition and fees will be paid in full by the Institute.

For further information and to make application, contact Prof. Joseph Landin, 303 Altgeld Hall, University of Illinois, Urbana, Ill. (This program is for math teachers only.)

The Mathematics Problem

— *By Dr. John G. Kemeny, Chairman Mathematics Department, Dartmouth College, Hanover, N.H.*

Most parents would not believe it if they were told their son could study a certain subject in our schools for 14 years without finding out what the subject was really about, or what has been happening in this subject in the last 150 years. Yet, this is precisely what the present Mathematics program is designed to do. Students can take eight years of primary school, four years of secondary school and two years of college Mathematics, without hearing a single development less than 150 years old, and without acquiring any real insight into the subject.

As a matter of fact, the average American has not even been let in on the secret that Mathematics has been developing at a rapid pace during this century-and-a-half, and that this pace seems to be quickening each year. Vast new areas have opened up that 99% of our college graduates have never heard of. The very conception of what Mathematics is all about has broadened to the point where a traditionally educated person would not even recognize it as Mathematics. The subject started out as a study of numerical and spatial relations. But now the mathematician will undertake to study any type of relationship, as long as the intricacy of the pattern arouses his interest.

Modern Mathematics

This has tended to make Modern Mathematics more abstract than its predecessors. We now try to make a single theorem do the work of a dozen different results in as many different fields. But it has also made Mathematics of much greater practical importance, since there are so many more areas in which it is applicable. It is a subject of great inherent beauty and of vast significance for the progress of our Nation. And yet, we keep this impressive structure entirely hidden from the vast majority of educated citizens.

What can be done to remedy this 100-year-old curriculum? Some of the new branches of Mathematics must be injected in the curriculum as early as possible. Dartmouth College now has a program which assures that every student taking at least a year of college Mathematics will be introduced to four such branches. They will meet Mathematical Logic with its contributions to the sharpening of the reasoning process; they will meet Set Theory and topics from Modern Algebra, which are fundamental to the understanding of any branch of Mathematics; and they will learn about Probability Theory, which is second to no branch in its practical significance.

This very successful Dartmouth experiment has spread to many other colleges; other experiments have also demonstrated that college freshmen and sophomores have no trouble in acquiring modern ideas.

Mathematics In High School

But these ideas can and must infiltrate the secondary school program. The Commission on Mathematics of the CEEB (425 West 117th St., New York, N.Y.) has worked out a series of recommendations for improving this archaic program. It has shown where to cut away dead wood, where to cut down on time spent, and where to inject a modern flavor. It is also prepared to show secondary schools the type of Modern Mathematics suitable for the 11th or 12th grade.

But there is one task that no committee can accomplish. It cannot step into the classroom and do the actual teaching. Unless the secondary schools have teachers who understand the basic ideas of these modern branches of Mathematics, the program will not be undertaken, or—even worse—it will be doomed to failure.

The Program

Ideally, we would like to assure that all secondary teachers should have some understanding of Modern Mathematics, and perhaps in 30 years this goal will be reached. But what can be done *now*? I would recommend that every reasonably large secondary school should either hire one person competent in Modern Mathematics, or aid one of its present staff in acquiring this competence. A considerable amount can be learned in one year and two summers. An enlightened school that is willing to finance such education for one of its staff members will draw rich dividends in the future.

It would be particularly helpful if schools would indicate to the local teachers colleges that they expect their Mathematics teachers to have more of a modern background than in the past. We are in real danger of re-educating a small portion of our high school teachers and at the same time turning out a new generation of teachers as ignorant of modern developments as their students necessarily will be.

Gifted Students

There is a world of difference between the truly talented student and the merely competent one in Mathematics. The gifted student needs and deserves special attention. We cannot afford to waste our country's richest resource, its gifted young men and women. Ideally such students should be in special sections taught by specially qualified teachers. But if this is not practical, at least make available to him books from which he can educate himself. Any of the following five books should arouse a real interest in Modern Mathematics on the part of the gifted secondary school student.

(1) *Insights Into Modern Mathematics,* 23rd Yearbook, National Council of Teachers of Mathematics.

(2) *Introduction to Finite Mathematics,* Kemeny Snell, Thompson. Published by Prentice-Hall.

(3) *Introductory Probability and Statistical Inference for Secondary Schools,* Commission on Mathematics.

(4) *Principles of Mathematics,* Allendoerfer, Oakley. Published by McGraw-Hill.

(5) *Universal Mathematics, Part II,* Committee on the Undergraduate Program, Mathematical Association of America.

● *Audio-Visual*

Who's responsible for bad TV? asked "Miss Frances" (Mrs. Frances Horwich) of "Ding-Dong School" fame, in a recent session of the University of Chicago Alumni School. Her answer: It is the responsibility of the viewer to influence TV networks into producing higher quality programs.

She deplored several aspects of present TV as "definitely frightening." Included in her criticism were the lack of leadership in experimentation with new kinds of programs, the number of programs that teach viewers to copy or ape rather than originate, the amount of plain misinformation that is transmitted, the trend toward filmed rather than live shows and the ineffectiveness of the audience, who complain but don't act to change bad shows.

Some of the main causes of these faults, Mrs. Horwich said, were the advertisers' dominance over what is telecast and the power of ratings which "saturate the air with an overdose of sameness."

As a substitute, Mrs. Horwich suggested more influence by viewers, who should sample the programs their children see, write their comments to broadcasters and refuse to buy the products of the worst offenders, in the hope that this would increase the quality and variety of programs available.

CURRENT READING OF SPECIAL INTEREST

Educators Guide to Free Tapes, Scripts and Transcriptions. *Fourth Annual Edition, 1958. Educators Progress Service, Randolph, Wisconsin. 206pp. Paper. $5.75. (Devoted exclusively to free tapes, free scripts and free transcriptions. A complete, annotated schedule of free audio aids and scripts. Contains, also, article on "Audio Experiences for Enriching and Individualizing Instruction," by Dr. Walter A. Wittich.)*

● *Physical Education and Health*

An expanded physical fitness program will be put into operation this spring in Louisville, William A. Moore, parks director announced. The purpose is to reach all youngsters in the Louisville area.

The city's 18 postal zones will be areas of athletic competition. Neighborhood groups will compete within their postal zones. City-wide or city-county-wide contests will be held, with teams from all postal zones competing for championships.

The aim is to give more youngsters a chance to take part in games and improve their physical fitness. Sports will include: boxing, swimming, track and field, baseball, softball, football and basketball. The program will be an extension of the present school and Recreation Division athletics. The championship games will be on college campuses, at the city recreational fields and the State Fairgrounds.

Moore plans to enlist the aid of a committee of citizens in each postal zone to help with the program.

Approving the plans, Louisville's Mayor Hoblitzell pointed out, "The only trouble with kids is that they don't know what to do. We want to give them plenty to do."

Mass X-rays for TB testing in Virginia's high schools were halted as of January 1, the State Health Department has disclosed. The new emphasis will be placed on selected groups rather than on the general community.

The selected groups are those in which there is the greatest risk of contracting the disease. These include persons in hospitals, mental, penal and other institutions, low-income groups, migrant workers and those known to have been exposed to the disease.

The health officials have agreed that a tuberculin test is perhaps better than a survey X-ray for youngsters under 18 years of age. Because of the new recommendations, the age restriction in Virginia for participation in the state X-ray program has been raised from 15 to 18. This automatically eliminates X-ray surveys in high schools.

CURRENT READING OF SPECIAL INTEREST

Teaching Nutrition, *by Mattie Pattison, Helen Barbour and Ercel Eppright. Iowa State College Press, Press Bldg., Ames, Iowa. 212pp. Charts. Illus. $3.95. (A new approach to the teaching of nutrition, providing basic nutrition information reduced to its simplest terms, plus educational procedures for introducing nutrition to different age groups.)*

Health Observation of School Children, *by George M. Wheatley and Grace T. Hallock. Revised ed. McGraw-Hill Book Co., 330 West 42nd St., N.Y. 36. 488pp. Charts. $6.50. (A guide for helping teachers to observe and understand the school child in health and illness. Excellent in specialized approach, development of procedures.)*

Fitness for Secondary School Youth, *edited by Karl W. and Carolyn W. Bookwalter. American Association for Health, Physical Education and Recreation, 1201 16th St., N.W., Washington 6, D.C. 150pp. Illus. $2.50. (A survey, with recommendations, of the phases, relations and organization of the complete secondary school program of health education, physical education, recreation and outdoor education.)*

● *Science Education*

An experimental program in science to encourage "creative thinking and research mindedness" among top secondary school students will be conducted next summer by the Horace Mann High School in the Bronx (N.Y.).

The project will run for eight weeks and be limited to students of Horace Mann. However, Mitchell Gratwick, principal, said, "If it works, and if proper support can be obtained, we'll open it in future summers to students from other schools in New York City."

Eight students have already been selected toward a total of 24. The students will concentrate in one of three science fields—biology, physics or chemistry. The program will give participating students the opportunity to work full time in the school's science labs under the direction of competent instructors, as well as engaging in intensive individual projects.

"The emphasis will be on learning for its own sake, rather than for credits or grades," Gratwick said. "We

hope to attract to such a program as this the really exciting and excited young people whose opportunity to undertake a self-designed experiment in physics, chemistry or biology is now restricted to the cellar, the garage or the kitchen sink."

We might say the primary function of our educational institution is to spread before our young people the entire array of human knowledge in sufficient detail to permit each young man and each young woman to choose freely the career to which they wish to devote their lives, and to make their best contribution to that career. On this premise, if young people enter our educational institutions in sufficient numbers, we can safely rely on the laws of probability and the inherent variability of human aspirations to provide us with competence in all vocations and professions.

It is certainly true that the events of the past few weeks emphasize the need for re-examining our facilities for scientific and technical education. It is evident that we shall need more scientists and, more particularly, better scientists if we are to maintain our place in a scientific world. There are many sound ways in which we can move in this direction without departing from basic principles. We can give our children better career guidance; we can improve teaching competence in the scientific area; we can provide motivation for the many talented high school graduates who do not now attend college. All these are natural processes and will surely produce results. The ultimate choice of a career must, however, remain free. We cannot expect to convert potential writers, historians or businessmen into creative workers in scientific laboratories. Such a move would add little to the progress of science, while impoverishing all other areas of human activity.

There is, moreover, the same basic interdependence between all intellectual pursuits as there is between the scientific disciplines. I have long felt that an understanding of science should be just as important an element in one's cultural equipment as English or philosophy or music. Conversely, a scientist will be a better scientist if he has an appreciation of the humanities, literature and the arts. This requires the educational process to be diverse as well as specific—in short, to have as many facets as there are divisions of human knowledge. If we do the job well, we will have scientists in sufficient numbers and with sufficient competence to maintain a vigorous, dynamic society, without interference with other vocations.

—*Crawford H. Greenewalt*, president
E.I. duPont de Nemours & Company
(From a speech, "The Fickle Fashions of Science," delivered before the Society of Sigma Xi and Scientific Research Society of America, Indianapolis, December 27, 1957.)

● *Higher Education*

The number of married students on American college campuses has been steadily rising since World War II, a recent U.S. Office of Education survey reports. Married students, a major sociological change in college and university life, now represent an impressive total of nearly 14% of the three million students in higher education.

On some campuses, the percentages are running even higher. At the University of Illinois, the figure is 15%, as it is at almost all of the Indiana schools. If the figures for married graduate students are totaled, the married student group on some campuses is a major campus force. A sampling of 270 schools taken by the USOE last June shows that 36% of those reporting revealed a married student population ranging from 16% to 25%. At Stanford University, for example, one fifth, or 1532, students are married, with a total of 1579 children. Stanford expects that in the next ten years as much as 35% of those at Stanford and at other institutions throughout the Nation will be family men and women.

CURRENT READING OF SPECIAL INTEREST

Financial Aid for College Students: Undergraduate, *by Theresa Birch Wilkins. U.S. Office of Education, HEW, Supt. of Documents, U.S. Government Printing Office, Washington 25, D.C. 232pp. Paper. $1.00 (A bulletin reporting information about loans, scholarships and opportunities for employment available to undergraduate students at colleges and universities throughout the country for 1955-56.)*

● *School Plant*

New designs for school buildings is the object of a new nonprofit organization, Educational Facilities Laboratory, financed ($4.5 million) by the Ford Foundation. The experimental group will try to improve school and college building design through research and experimentation, and to develop more economical construction methods.

The Laboratory, which will also act as a clearinghouse for information, will make its data on school design building and equipment available to architects, school boards, college trustees and others interested in the nationwide expansion of educational facilities within the next ten years.

The Ford Foundation will finance the new organization for the next five years. More than half of the grant of $4½ million will be used for experimentation in the field of construction and equipment (elementary, secondary, college levels) through grants to educational institutions.

CURRENT READING OF SPECIAL INTEREST

Administrative Facilities in School Buildings, *by James L. Taylor. U.S. Office of Education, HEW, Supt. of Documents, U.S. Government Printing Office, Washington 25, D.C. 52pp. Paper. 45c. (A pamphlet designed to assist planners in providing facilities which meet school administrative needs in the local situation. Procedure of study emphasizing importance of studying and analyzing administrative functions and activities when planning facilities.)*

● *Panorama*

California The San Lorenzo School District has just put a specially equipped school bus on the road that is probably unique. Used to carry crippled children from several Alameda County communities to San Lorenzo's school for the handicapped, the $14,000 bus has a built-in, battery-operated elevator. Other gadgets: a safety gate to protect children's feet while the elevator is in motion, individual seat belts and floor attachments to anchor wheelchairs.

Canada Protecting Canadian teen-agers from John Barleycorn, disguised as a chocolate bonbon, was the task of Ontario's Liquor Control Board last month. Reason: The crackdown came when it was discovered that every candy shop in town was selling imported bonbons, spiked with an alcoholic fill having alcoholic content up to 17%. On the American side of the border, the Federals went into action to prevent any of the loaded sweets from slipping through the customs' barriers.

Washington, D.C. A number of accidents among young amateur rocket men in the Washington area has resulted in an effort to set up a program there that will supervise future rocket experimentation among youngsters. Under consideration are supervised tests on school athletic fields to "demonstrate the hazards of working with rockets and rocket fuels." Above all, said the District's public school director of science, Keith C. Johnson, "we do not want to drive the experiments underground. But we think it is essential that responsible supervision be provided for experimenters before more accidents occur." Other states, confronted with the same problem, are facing it squarely; none more so perhaps than Connecticut which has, to all extents and purposes, outlawed youngsters fooling around with rockets.

Kentucky Last March Juvenile Trial Commissioner Rhodes Clay set up traffic cases in Lexington. Last month the new County Judge, Bart Peak, who presides over Juvenile Court, threw the system out. Reason: The teen-age juries actually had no authority. The judge could reject their decisions at will.

The main benefit had been in educating the jurors. While this is a useful occupation, nevertheless, it is not a function of the Juvenile Court. Judge Peak added that he might try the juvenile juries again at some other time.

New Jersey Dr. Edward P. Duffy, president of the New Jersey Association for Mental Health, told the State Youth Study Commission that school teachers in the state should be given regular psychiatric examinations. These evaluations should be followed by treatment where the examining physician feels it is necessary. As a matter of fact, he urged, such treatment should be made mandatory for continued employment in the school system. He also called for periodic psychiatric evaluations of school children, as a part of their regular health examinations.

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